



Cimarex Energy Co.

Lea County (NAD 83)
Sec 33 - T19S - R34E
Chapparral 33 Fed Com #3

Wellbore #1

Plan: Plan #1

Standard Planning Report

02 March, 2011

Oil Conservation Division
Case No. 13
Exhibit No. 13



Great White Directional Services

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Chapparal 33 Fed Com #3
Company:	Cimarex Energy Co.	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Project:	Lea County (NAD 83)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 33 - T19S - R34E	North Reference:	Grid
Well:	Chapparal 33 Fed Com #3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project	Lea County (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sec 33 - T19S - R34E		
Site Position:	From: Map	Northing:	591,385.60 usft
		Easting:	779,655.50 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 37' 24.180 N
		Longitude:	103° 33' 33.346 W
		Grid Convergence:	0.42 °

Well	Chapparal 33 Fed Com #3		
Well Position	+N/-S	30.0 usft	Northing:
	+E/-W	-0.3 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level:
			0.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF200510	02/01/11	7.64
			Dip Angle
			(°)
			60.59
			Field Strength
			(nT)
			48,956

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			177.68

Plan Sections:										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
10,629.0	0.00	0.00	10,629.0	0.0	0.0	0.00	0.00	0.00	0.00	
10,929.0	90.00	177.68	10,820.0	-190.8	7.7	30.00	30.00	0.00	177.68	
15,504.3	90.00	177.68	10,820.0	-4,762.4	192.9	0.00	0.00	0.00	0.00	Chapparal #3 PBHL



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Site:	Sec 33 - T19S - R34E	North Reference:	Grid
Well:	Chapparral 33 Fed Com #3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,629.0	0.00	0.00	10,629.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP 30°/100 DLS @ 177.68° AZI									
10,630.0	0.30	177.68	10,630.0	0.0	0.0	0.0	30.00	30.00	0.00
10,640.0	3.30	177.68	10,640.0	-0.3	0.0	0.3	30.00	30.00	0.00
10,650.0	6.30	177.68	10,650.0	-1.2	0.0	1.2	30.00	30.00	0.00
10,660.0	9.30	177.68	10,659.9	-2.5	0.1	2.5	30.00	30.00	0.00
10,670.0	12.30	177.68	10,669.7	-4.4	0.2	4.4	30.00	30.00	0.00
10,680.0	15.30	177.68	10,679.4	-6.8	0.3	6.8	30.00	30.00	0.00
10,690.0	18.30	177.68	10,689.0	-9.7	0.4	9.7	30.00	30.00	0.00
10,700.0	21.30	177.68	10,698.4	-13.0	0.5	13.0	30.00	30.00	0.00
10,710.0	24.30	177.68	10,707.6	-16.9	0.7	16.9	30.00	30.00	0.00
10,720.0	27.30	177.68	10,716.6	-21.3	0.9	21.3	30.00	30.00	0.00
10,730.0	30.30	177.68	10,725.4	-26.1	1.1	26.1	30.00	30.00	0.00
10,740.0	33.30	177.68	10,733.9	-31.3	1.3	31.4	30.00	30.00	0.00
10,750.0	36.30	177.68	10,742.1	-37.0	1.5	37.1	30.00	30.00	0.00
10,760.0	39.30	177.68	10,750.0	-43.2	1.7	43.2	30.00	30.00	0.00
10,770.0	42.30	177.68	10,757.5	-49.7	2.0	49.7	30.00	30.00	0.00
10,780.0	45.30	177.68	10,764.8	-56.6	2.3	56.6	30.00	30.00	0.00
10,790.0	48.30	177.68	10,771.6	-63.9	2.6	63.9	30.00	30.00	0.00
10,800.0	51.30	177.68	10,778.1	-71.5	2.9	71.6	30.00	30.00	0.00
10,810.0	54.30	177.68	10,784.1	-79.5	3.2	79.5	30.00	30.00	0.00
10,820.0	57.30	177.68	10,789.7	-87.7	3.6	87.8	30.00	30.00	0.00
10,830.0	60.30	177.68	10,794.9	-96.3	3.9	96.4	30.00	30.00	0.00
10,840.0	63.30	177.68	10,799.6	-105.1	4.3	105.2	30.00	30.00	0.00
10,850.0	66.30	177.68	10,803.9	-114.1	4.6	114.2	30.00	30.00	0.00
10,860.0	69.29	177.68	10,807.7	-123.4	5.0	123.5	30.00	30.00	0.00
10,870.0	72.29	177.68	10,811.0	-132.8	5.4	132.9	30.00	30.00	0.00
10,880.0	75.29	177.68	10,813.7	-142.4	5.8	142.5	30.00	30.00	0.00
10,890.0	78.29	177.68	10,816.0	-152.1	6.2	152.2	30.00	30.00	0.00
10,900.0	81.29	177.68	10,817.8	-162.0	6.6	162.1	30.00	30.00	0.00
10,910.0	84.29	177.68	10,819.1	-171.9	7.0	172.0	30.00	30.00	0.00
10,920.0	87.29	177.68	10,819.8	-181.8	7.4	182.0	30.00	30.00	0.00
10,929.0	90.00	177.68	10,820.0	-190.8	7.7	191.0	30.00	30.00	0.00
EOC - Hold to TD									
11,000.0	90.00	177.68	10,820.0	-261.8	10.6	262.0	0.00	0.00	0.00
11,100.0	90.00	177.68	10,820.0	-361.7	14.7	362.0	0.00	0.00	0.00
11,200.0	90.00	177.68	10,820.0	-461.6	18.7	462.0	0.00	0.00	0.00
11,300.0	90.00	177.68	10,820.0	-561.5	22.7	562.0	0.00	0.00	0.00
11,400.0	90.00	177.68	10,820.0	-661.4	26.8	662.0	0.00	0.00	0.00
11,500.0	90.00	177.68	10,820.0	-761.4	30.8	762.0	0.00	0.00	0.00
11,600.0	90.00	177.68	10,820.0	-861.3	34.9	862.0	0.00	0.00	0.00
11,700.0	90.00	177.68	10,820.0	-961.2	38.9	962.0	0.00	0.00	0.00
11,800.0	90.00	177.68	10,820.0	-1,061.1	43.0	1,062.0	0.00	0.00	0.00
11,900.0	90.00	177.68	10,820.0	-1,161.0	47.0	1,162.0	0.00	0.00	0.00
12,000.0	90.00	177.68	10,820.0	-1,260.9	51.1	1,262.0	0.00	0.00	0.00
12,100.0	90.00	177.68	10,820.0	-1,360.9	55.1	1,362.0	0.00	0.00	0.00
12,200.0	90.00	177.68	10,820.0	-1,460.8	59.2	1,462.0	0.00	0.00	0.00
12,300.0	90.00	177.68	10,820.0	-1,560.7	63.2	1,562.0	0.00	0.00	0.00
12,400.0	90.00	177.68	10,820.0	-1,660.6	67.3	1,662.0	0.00	0.00	0.00
12,500.0	90.00	177.68	10,820.0	-1,760.5	71.3	1,762.0	0.00	0.00	0.00
12,600.0	90.00	177.68	10,820.0	-1,860.5	75.4	1,862.0	0.00	0.00	0.00
12,700.0	90.00	177.68	10,820.0	-1,960.4	79.4	1,962.0	0.00	0.00	0.00
12,800.0	90.00	177.68	10,820.0	-2,060.3	83.5	2,062.0	0.00	0.00	0.00
12,900.0	90.00	177.68	10,820.0	-2,160.2	87.5	2,162.0	0.00	0.00	0.00



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Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,000.0	90.00	177.68	10,820.0	-2,260.1	91.6	2,262.0	0.00	0.00	0.00	
13,100.0	90.00	177.68	10,820.0	-2,360.0	95.6	2,362.0	0.00	0.00	0.00	
13,200.0	90.00	177.68	10,820.0	-2,460.0	99.7	2,462.0	0.00	0.00	0.00	
13,300.0	90.00	177.68	10,820.0	-2,559.9	103.7	2,562.0	0.00	0.00	0.00	
13,400.0	90.00	177.68	10,820.0	-2,659.8	107.8	2,662.0	0.00	0.00	0.00	
13,500.0	90.00	177.68	10,820.0	-2,759.7	111.8	2,762.0	0.00	0.00	0.00	
13,600.0	90.00	177.68	10,820.0	-2,859.6	115.9	2,862.0	0.00	0.00	0.00	
13,700.0	90.00	177.68	10,820.0	-2,959.6	119.9	2,962.0	0.00	0.00	0.00	
13,800.0	90.00	177.68	10,820.0	-3,059.5	124.0	3,062.0	0.00	0.00	0.00	
13,900.0	90.00	177.68	10,820.0	-3,159.4	128.0	3,162.0	0.00	0.00	0.00	
14,000.0	90.00	177.68	10,820.0	-3,259.3	132.0	3,262.0	0.00	0.00	0.00	
14,100.0	90.00	177.68	10,820.0	-3,359.2	136.1	3,362.0	0.00	0.00	0.00	
14,200.0	90.00	177.68	10,820.0	-3,459.1	140.1	3,462.0	0.00	0.00	0.00	
14,300.0	90.00	177.68	10,820.0	-3,559.1	144.2	3,562.0	0.00	0.00	0.00	
14,400.0	90.00	177.68	10,820.0	-3,659.0	148.2	3,662.0	0.00	0.00	0.00	
14,500.0	90.00	177.68	10,820.0	-3,758.9	152.3	3,762.0	0.00	0.00	0.00	
14,600.0	90.00	177.68	10,820.0	-3,858.8	156.3	3,862.0	0.00	0.00	0.00	
14,700.0	90.00	177.68	10,820.0	-3,958.7	160.4	3,962.0	0.00	0.00	0.00	
14,800.0	90.00	177.68	10,820.0	-4,058.6	164.4	4,062.0	0.00	0.00	0.00	
14,900.0	90.00	177.68	10,820.0	-4,158.6	168.5	4,162.0	0.00	0.00	0.00	
15,000.0	90.00	177.68	10,820.0	-4,258.5	172.5	4,262.0	0.00	0.00	0.00	
15,100.0	90.00	177.68	10,820.0	-4,358.4	176.6	4,362.0	0.00	0.00	0.00	
15,200.0	90.00	177.68	10,820.0	-4,458.3	180.6	4,462.0	0.00	0.00	0.00	
15,300.0	90.00	177.68	10,820.0	-4,558.2	184.7	4,562.0	0.00	0.00	0.00	
15,400.0	90.00	177.68	10,820.0	-4,658.2	188.7	4,662.0	0.00	0.00	0.00	
15,504.0	90.00	177.68	10,820.0	-4,762.1	192.9	4,766.0	0.00	0.00	0.00	
TD at 15504.3										
15,504.3	90.00	177.68	10,820.0	-4,762.4	192.9	4,766.3	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Chapparral #3 PBHL	0.00	0.00	10,820.0	-4,762.4	192.7	586,653.20	779,847.90	32° 36' 37.341 N	103° 33' 31.500 W	
- plan misses target center by 0.2usft at 15504.3usft MD (10820.0 TVD, -4762.4 N, 192.9 E)										
- Point										

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
5,600.0	5,600.0	Cherry Canyon		0.00		
8,250.0	8,250.0	Bone Spring		0.00		
9,480.0	9,480.0	1st Bone Spring Sand		0.00		
10,000.0	10,000.0	2nd Bone Spring Sand		0.00		
10,570.0	10,570.0	3rd Bone Spring Sand		0.00		



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Project:	Lea County (NAD 83)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 33 - T19S - R34E	North Reference:	Grid
Well:	Chapparral 33 Fed Com #3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,629.0	10,629.0	0.0	0.0	KOP 30°/100 DLS @ 177.68° AZI
10,929.0	10,820.0	-190.8	7.7	EOC - Hold to TD
15,504.0	10,820.0	-4,762.1	192.9	TD at 15504.3



Cimarex Energy Co.
Project: Lea County (NAD 83)
Site: Sec 33 - T19S - R34E
Well: Chapparral 33 Fed Com #3
Wellbore: Wellbore #1

WELL DETAILS: Chapparral 33 Fed Com #3

+N-S	+E-W	Ground Level:	0.0	Latitude	Longitude
0.0	0.0	Eastings	779655.20	32° 37' 24.477 N	103° 33' 33.347 W
		SHL: 230' FSL / 810' FEL			
		BHL: 330' FSL / 660' FEL			

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N-S	+E-W	Latitude	Longitude
Chapparral #3 PBHL	10820.0	-4762.4	192.7	32° 36' 37.341 N	103° 33' 31.500 W

SECTION DETAILS

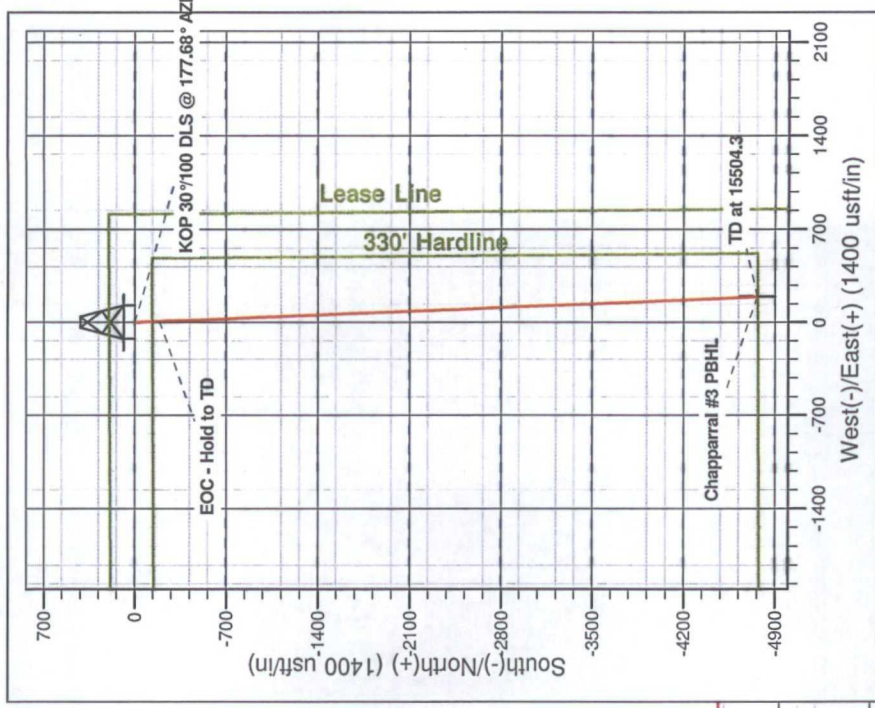
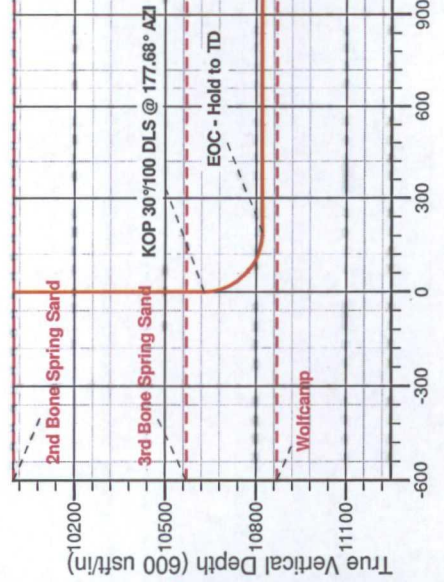
TVD	MD	Inc	Azi	+N-S	+E-W	Vsect	Departure	Annotation
10629.0	10629.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP 30°/100 DLS @ 177.68° AZI
10820.0	10929.0	90.00	177.68	-190.8	7.7	191.0	191.0	EOC - Hold to TD
10820.0	15504.0	90.00	177.68	-4762.1	192.9	4766.0	4766.0	TD at 15504.3

ANNOTATIONS

TVD	MD	Inc	Azi	+N-S	+E-W	Vsect	Departure	Annotation
10629.0	10629.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP 30°/100 DLS @ 177.68° AZI
10820.0	10929.0	90.00	177.68	-190.8	7.7	191.0	191.0	EOC - Hold to TD
10820.0	15504.0	90.00	177.68	-4762.1	192.9	4766.0	4766.0	TD at 15504.3

FORMATION TOP DETAILS

TVD/Path	MD/Path	Formation
5600.0	5600.0	Cherry Canyon
8250.0	8250.0	Bone Spring
9480.0	9480.0	1st Bone Spring Sand
10000.0	10000.0	2nd Bone Spring Sand
10570.0	10570.0	3rd Bone Spring Sand



Azimuths to Grid North
Total Correction: 7.23°
Magnetic Field
Strength: 48955.8mT
Dip Angle: 60.59°
Date: 2011/02/01
Model: IGRF200510